

J.W.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Victor N. Uebele et al.

Serial No. 10/589,702

Filed: August 17, 2006

For: NUCLEIC ACID MOLECULES ENCODING NOVEL MURINE
LOW-VOLTAGE ACTIVATED CALCIUM CHANNEL
PROTEINS, DESIGNATED ALPHA1H, ENCODED PROTEINS
AND METHODS OF USE THEREOFArt Unit: Not AssignedExaminer: Not Assigned

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR 1.97**

Sir:

1. In compliance with 37 C.F.R. 1.97, submitted on the attached form herewith is a list of patents, publications or other information which are requested to be made of record in this application. This Information Disclosure Statement is not an admission that any patent, publication or other information referred to herein is "prior art" for this invention. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b).

2. In accordance with 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

3. Applicants respectfully request that the Examiner initial the attached form after reviewing the pertinence of each reference.

4. Pursuant to 37 C.F.R. 1.98 (a)(2)(ii), copies of each cited U.S. patent and each U.S. patent application publication are not enclosed herewith.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on the date appearing below.

MERCK & CO., INC.

By  Date July 11, 2007

INFORMATION DISCLOSURE STATEMENT

5. Pursuant to 37 C.F.R. 1.98(d), copies of references listed on the attached form that were submitted to or cited by the Office in a related application upon which the instant application relies for an earlier filing date under 35 U.S.C. 120 are not enclosed. Related application(s) in which references were submitted to or cited by the Office are as follows:

RELATED APPLICATION		
U. S. SERIAL NUMBER	FILING DATE	MERCK CASE

If this is inconvenient, additional copies will be submitted upon request.

6. In accordance with 37 C.F.R. 1.97, (check one)

the attached information is filed within three months of the filing date of the captioned case.

the attached information is filed more than three months after the filing date but prior to the mailing of a first Office Action on the merits.

the attached information is filed before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

the attached information is being filed more than three months after the filing date and after the mailing of a first Office Action on the merits, but before the mailing date of a Final Action, Notice of Allowance, or an action that otherwise closes prosecution in the application. The enclosed authorization is therefore given to charge Deposit Account No. 13-2755 for the fee required under 37 C.F.R. 1.17(p).

each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.

each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart application *and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the information disclosure statement.*

no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated under 37 C.F.R. 1.56(c) more than three months prior to the filing of this Statement.

Respectfully submitted,



By: Anna Cocuzzo

Attorney _____ For Applicant(s)

Reg. No. 42,452 _____

MERCK & CO., INC.

Patent Dept., RY60-30

P.O. Box 2000

Rahway, N.J. 07065-0907

(732)594-1273 _____

Date: July 11, 2007

Substitute for form 1449A/PTO		COMPLETE IF KNOWN	
INFORMATION DISCLOSURE		Application Number	10/589,702
STATEMENT BY APPLICANT		Filing Date	August 17, 2002
JUL 13 2007 (use as many sheets as necessary)		First Named Inventor	Victor N. Uebele
		Group Art Unit	Not Assigned
		Examiner Name	Not Assigned
Sheet	1	of	8
		Attorney Docket Number	21314P

U.S. PATENT DOCUMENTS

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
	1	6,420,137		Strnad et al.	07/16/2002
	2	6,358,706		Dubin et al.	03/19/2002
	3	5,792,846		Hapold et al.	08/11/1998
	4	5,686,241		Ellis et al.	11/11/1997
	5	5,559,004		Steinhardt et al.	09/24/1996
	6	5,436,128		Harpold et al.	07/25/1995
	7	5,401,629		Harpold et al.	03/28/1995
	8	5,312,928		Goldin et al.	05/17/1994
	9	4,981,867		Prince	01/01/1991
	10	4,946,778		Ladner et al.	08/07/1990
	11	4,816,567		Cabilly et al.	03/28/1989
	12	4,366,241		Tom et al.	12/28/1982
	13	4,277,437		Maggio	07/07/1981
	14	4,275,149		Litman et al.	06/23/1981
	15	3,996,345		Ullman et al.	12/07/1976
	16	3,939,350		Singleton et al.	08/17/1999
	17	3,850,752		Schuurs et al.	11/26/1974
	18	3,817,837		Rubenstein et al.	06/18/1974

FOREIGN PATENT DOCUMENTS

Examiner Signature _____ Date Considered _____

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Computer generated form "IDS Form" (IDS Folder), Merck & Co, Inc. 8/24/2006

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

2

of

8

COMPLETE IF KNOWN	
Application Number	10/589,702
Filing Date	August 17, 2002
First Named Inventor	Victor N. Uebele
Group Art Unit	Not Assigned
Examiner Name	Not Assigned

Attorney Docket Number 21314P

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	A	Tsien et al., Trends Neurosci., Vol. 11:431-438 (1988)
	B	Catterall, W. A., Annu. Rev. Cell Dev. Biol., 16:521-555 (2000)
	C	Llinas et al., Trends Neurosci., 15:351-355 (1992)
	D	Hess, P., Ann. Rev. Neurosci., 56:337 (1990)
	E	Bean, B. P., Ann. Rev. Physiol., 51:367-384 (1989)
	F	McCleskey, E. W. et al., Curr. Topics Membr. 39:295-326 (1991)
	G	Dunlap, K. et al., Trends Neurosci. 18:89-98 (1995)
	H	Sather, W. A., et al., Neuron 11:291-303 (1995)
	I	Stea, A. et al., Proc. Natl. Acad. Sci. USA 91:10576-10580 (1994)
	J	Bourinet, E. et al., Nature Neuroscience 2:407-415 (1999)
	K	Ertel and Ertel, Trends Pharmacol. Sci., 18:37-42 (1997)
	L	Hofmann et al., Rev. Physiol. Biochem. Pharmacol. 139:33-87 (1999)
	M	Lacinova et al., Gen. Physiol. Biophys., 19:121-36 (2000)
	N	Perez-Reyes et al., Nature, 391:896-900 (1998)
	O	Buhler, F. R., J. Hypertension Supplement 15(5):S3-7 (1997)

Examiner Signature		Date Considered
--------------------	--	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 8/24/2006

Substitute for form 1449B/PTO				COMPLETE IF KNOWN	
				Application Number	10/589,702
				Filing Date	August 17, 2002
				First Named Inventor	Victor N. Uebele
				Group Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	3	of	8	Attorney Docket Number	21314P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	P	Cremers B. et al., J. Cardiovascular Pharmacology, 29(5):692-696 (1997)
	Q	White et al., Proc. Natl. Acad. Sci. USA 86:6802-6806 (1989)
	R	Lambert et al., J. Neurosci., 17:6621-6628 (1997)
	S	Leuranguer et al., Neuropharmacology, 37:701-708 (1998)
	T	Fletcher et al., Cell, 87:607-617 (1996)
	U	Burgess et al., Cell, 88:385-392 (1997)
	V	Ophoff et al., Cell, 87:543-552 (1996)
	W	Zhuchenko, O. et al., Nature Genetics, 15:62-69 (1997)
	X	Katz, A. M., Eur. Heart J. Suppl., H18-H23, (1999)
	Y	Lijnen and Petrov, Exp. Clin. Pharmacol., 21:253-259 (1999)
	Z	Talley et al., J. Neurosci., 19:1895-1911 (1999)
	AA	Suzuki and Rogawski, Proc. Natl. Acad. Sci. USA, 86:7228-7232 (1989)
	AB	Huguenard, J. R., Annu. Rev. Physiol., 329-348 (1996)
	AC	Tsakiridou et al., J. Neurosci., 15:3110-3117 (1995)
	AD	Coulter et al., Ann. Neurol., 25:582-593 (1989)

Examiner Signature	Date Considered
--------------------	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 06/28/2007

Substitute for form 1449B/PTO				COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/589,702
				Filing Date	August 17, 2002
				First Named Inventor	Victor N. Uebele
				Group Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	4	of	8	Attorney Docket Number	21314P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	AE	McCormick and Bal, Annu. Rev. Neurosci., 20:185-215 (1997)
	AF	Todorovic and Lingle, J. Neurophysiol, 79:240-252 (1998)
	AG	Rousseau et al., J. Am. Coll. Cardiol., 28:972-979 (1996)
	AH	Sen and Smith, Cir. Res., 75:149-55 (1994)
	AI	Xu and Best, Proc. Natl. Acad. Sci. USA, 87:4655-4659 (1990)
	AJ	Griswold, Intl. Rev. Cytol., 133:156 (1988)
	AK	Bhattacharjee, A. et al., Endocrinology, Vol. 138(9):3735-3740 (1997)
	AL	Burgess and Noebels, Epilepsy Res., 36:111-122 (1999)
	AM	Lee et al., Biophys. J., 76:A408; W-Pos42 (1999)
	AN	Ellis et al., Science, 241(4873) p. 1661 (1988)
	AO	Williams et al., Neuron, 8(1):71-84 (1992)
	AP	McRory et al., J. Biol. Chem., 276(6):3999-4011 (2001)
	AQ	Nielsen, P. E. et al., Anti-Cancer Drug Design, 8:53-63 (1993)
	AR	Murray, E. et al., Nuc. Acids Res., 17:477-498 (1989)
	AS	Coombs, J., Dictionary of Biotechnology, Stockton Press, New York, NY. (1994)

Examiner Signature	Date Considered
--------------------	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 06/28/2007

Substitute for form 1449B/PTO				COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/589,702
				Filing Date	August 17, 2006
				First Named Inventor	Victor N. Uebele
				Group Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	5	of	8	Attorney Docket Number	21314P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	AT	Dieffenbach, C. W. and G. S. Dveksler, PCR Primer, a Laboratory Manual, Cold Spring Harbor Press, Plainview, N.Y. (1995)
	AU	Caruthers, M. H. et al. Nuc. Acids Res. Symp. Ser. 215-23 (1980)
	AV	Horn, T. et al. Nuc. Acids Res. Symp. Ser. 225-32 (1980)
	AW	Creighton; Proteins Structures and Molecular Principles, W. H. Freeman & Co., New York, N.Y. (1983)
	AX	Roberge, J. Y. et al., Science, 269:202-204 (1995)
	AY	Maniatis et al., Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Plainview, N.Y. (1989)
	AZ	Ausubel, F. M. et al., Current Protocols in Molecular Biology, John Wiley & Sons, New York, N.Y. (1989)
	BA	Van Heeke, G. and S. M. Schuster, J. Bol. Chem., 264:5503-5509 (1989)
	BB	Rhodes, C. A. et al., Science, 240:204-207 (1988)
	BC	Takamatsu, N. et al., EMBO Journal, 6:307-311 (1987)
	BD	Winter, J. and Sinibaldi, R. M., Results Probl. Cell Differ, 17:85-105 (1991)
	BE	Smith, G. et al., J. Virol., 46:584 (1983)
	BF	Engelhard, E. K. et al., Proc. Natl. Acad. Sci., 91:3224-3227 (1994)
	BG	Logan and Shenk, Proc. Natl. Acad. Sci., 81:3655-3659 (1984)
	BH	Scharf, D. et al., Results Probl. Cell Differ, 20:126-162 (1994)

Examiner Signature		Date Considered
--------------------	--	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 06/28/2007

Substitute for form 1449B/PTO				COMPLETE IF KNOWN	
INFORMATION DISCLOSURE				Application Number	10/589,702
STATEMENT BY APPLICANT				Filing Date	August 17, 2006
<i>(use as many sheets as necessary)</i>				First Named Inventor	Victor N. Uebele
				Group Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	6	of	8	Attorney Docket Number	21314P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	BI	Bitter, M. et al., Methods in Enzymology 153:516-544 (1987)
	BJ	Wigler, M. et al., Cell, 11:223-232 (1977)
	BK	Lowy, I. et al., Cell, 22:817-823 (1980)
	BL	Wigler, M. et al., Proc. Natl. Acad. Sci., 77:3567-3570 (1980)
	BM	Colbere-Garapin, F. et al., J. Mol. Biol., 150:1-14 (1981)
	BN	Hartman, S. C. and R. C. Mulligan, Proc. Natl. Acad. Sci., 85:8047-8051 (1988)
	BO	Rhodes, C. A. et al., Methods Mol. Biol., 55:121-131 (1995)
	BP	Claudio et al., Science, 238:1688-1694 (1987)
	BQ	Mishina et al., Nature, 313, 364 (1985)
	BR	Noda et al., Nature, 322, 826-828 (1986)
	BS	Hampton, R. et al., Serological Methods, A Laboratory Manual, APS Press, St. Paul, Minn. (1990)
	BT	Maddox, D. E. et al., J. Exp. Med., 158:1211-1226 (1983)
	BU	Kroll, D. J. et al., DNA Cell Biol., 12:441-453 (1993)
	BV	Letts et al., Nat. Genet., 19:340-347 (1998)
	BW	Burgess et al., Cell, 88:385-392 (1997)

Examiner Signature	Date Considered
--------------------	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 06/28/2007

Substitute for form 1449B/PTO				COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/589,702
				Filing Date	August 17, 2006
				First Named Inventor	Victor N. Uebele
				Group Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	7	of	8	Attorney Docket Number	21314P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	BX	Perez-Reyes, Edward., Physiol. Rev., "Molecular Physiology of Low-Voltage Activated T-type Calcium Channels", 83:117-161 (2003)
	BY	Koehler & Milstein, Nature, 2, 256:495-497 (1975)
	BZ	Kozbor et al., Immunol. Today, 4:72 (1983)
	CA	Cote et al., Proc. Natl. Acad. Sci., 80:2026-2030 (1983)
	CB	Cole et al., Monoclonal Antibodies and Cancer Therapy, Alan R. Liss Inc., New York, N.Y., pp.77-96 (1985)
	CC	Morrison et al., Proc. Natl. Acad. Sci., 81:6851-6855 (1984)
	CD	Neuberger et al., Nature, 312:604-608 (1984)
	CE	Takeda et al., Nature, 314:452-454 (1985)
	CF	Orlandi et al., Proc. Natl. Acad. Sci., 86:3833-3837 (1989)
	CG	Winter, G. and C. Milstein, Nature, 349:293-299 (1991)
	CH	Huse, W. D. et al., Science, 246:1275-1281 (1989)
	CI	Maddox, D. E. et al., J. Exp. Med., 158:1211-1226 (1983)
	CJ	Hardman, J. G. et al., Goodman & Gilman's: The Pharmacological Basis of Therapeutics, McGraw Hill, New York, N.Y., (1996)
	CK	Youssoufian, H. and H. F. Lodish, Mol. Cell Biol., 13:98-104 (1993)
	CL	Price, C. M. Blood Rev., 7:127-134 (1993)

Examiner Signature	Date Considered
--------------------	-----------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer generated form "IDS Form" (IDS Folder), Merck & Co., Inc., 06/28/2007

<p>Substitute for form 1449B/PTO</p> <p>INFORMATION DISCLOSURE</p> <p>STATEMENT BY APPLICANT</p> <p><i>(use as many sheets as necessary)</i></p>		COMPLETE IF KNOWN	
		Application Number	10/589,702
		Filing Date	August 17, 2002
		First Named Inventor	Victor N. Uebele
		Group Art Unit	Not Assigned
		Examiner Name	Not Assigned
Sheet	8	of	8
		Attorney Docket Number	

Examiner Signature _____ Date Considered _____

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. Computer-generated form "IDS Form" (IDS Folder), Marek & Co., Inc., 06/28/2007.